



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)  
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY  
PRODUCT CONTROL SECTION  
11805 SW 26 Street, Room 208  
Miami, Florida 33175-2474  
T (786) 315-2590 F (786) 315-2599

## NOTICE OF ACCEPTANCE (NOA)

[www.miamidade.gov/economy](http://www.miamidade.gov/economy)

**Groff Aluminum Florida Corporation**  
13125 N.W. 47<sup>th</sup> Avenue  
Opa-Loka, Florida 33054

### SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER- Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

### DESCRIPTION: 0.0373" (min.) Galvanized Steel Storm Panel Shutter

**APPROVAL DOCUMENT:** Drawing No. 12-086, titled 0.0375" Thick Galvanized Steel Storm Panel, sheets 1 through 4 of 4, and sheet 1A of 4, prepared by Tilteco, Inc., dated March 16, 2012, last revision #1 dated March 16, 2012, signed and sealed by Walter A. Tillit Jr., P.E., bearing Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and the expiration date by the Miami-Dade County Product Control Section.

### MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

**LABELING:** Each panel shall bear a permanent label with the manufacturer's name or logo, city, state, the following statement: "Miami-Dade County Product Control Approved", and NOA number, per TAS-201, TAS-202, and TAS-203, unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revise & renews NOA # 11-0525.02 and consists of this page 1, evidence submitted pages E-1, E-2, & E-3 as well as approval document mentioned above.

The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



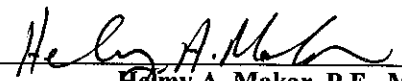
*Helmy A. Makar*  
09/20/2012

NOA No. 12-0529.23  
Expiration Date: 09/03/2013  
Approval Date: 09/20/2012  
Page 1

**Groff Aluminum Florida Corporation**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

- 1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL No. 01-0718.07**
  - A. DRAWINGS**
    1. *See NOA No. 98-060819*
  - B. TESTS**
    1. *See NOA No. 98-060819*
  - C. CALCULATIONS**
    1. *See NOA No. 98-060819*
  - D. MATERIAL CERTIFICATIONS**
    1. *See NOA No. 98-060819*
  - E. OTHER**
    1. *NOA No. 98-0608.19*
    2. *Statement from manufacturer certifying that fabrication of product has not changed. (Missing as of 7/26/01)*
- 2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 05-1220.11**
  - A. DRAWINGS**
    1. *Drawing No. 05-313, titled 0.0375" Thick Galvanized Storm Panel, sheets 1 through 4 of 4, and sheet 1A of 4, prepared by Tilteco, Inc., dated September 29, 2005, last revision #1 dated September 29, 2005, signed and sealed by Walter A. Tillit Jr., P.E.*
  - B. TESTS**
    1. *None.*
  - C. CALCULATIONS**
    1. *Anchor calculations prepared by Tilteco, Inc., dated November 08, 2005, sheets 1 through 37 of 37, signed and sealed by Walter A. Tillit Jr., P.E.*
  - D. QUALITY ASSURANCE**
    1. *By Miami-Dade County Building Code Compliance Office.*
  - E. MATERIAL CERTIFICATIONS**
    1. *None.*



**Helmy A. Makar, P.E., M.S.**  
**Product Control Unit Supervisor**  
**NOA No. 12-0529.23**  
**Expiration Date: 09/03/2013**  
**Approval Date: 09/20/2012**

**Groff Aluminum Florida Corporation**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #06-0717.09**

**A. DRAWINGS**

1. *None.*

**B. TESTS**

1. *None.*

**C. CALCULATIONS**

1. *None.*

**D. QUALITY ASSURANCE**

1. *By Miami-Dade County Building Code Compliance Office.*

**E. MATERIAL CERTIFICATIONS**

1. *None.*

**4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 11-0525.02**

**A. DRAWINGS**

1. *Drawing No. 11-051, titled 0.0375" Thick Galvanized Storm Panel, sheets 1 through 4 of 4, and sheet 1A of 4, prepared by Tilteco, Inc., dated May 19, 2011, last revision #1 dated May 19, 2011, signed and sealed by Walter A. Tillit Jr., P.E.*

**B. TESTS**

1. *None.*

**C. CALCULATIONS**

1. *None.*

**D. QUALITY ASSURANCE**

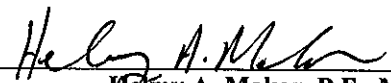
1. *By Miami-Dade County Building and Neighborhood Compliance Department (BNC).*

**E. MATERIAL CERTIFICATIONS**

1. *None.*

**F. OTHERS**

1. *A statement Letter from hurricane Engineering & Testing, Inc. informing our office regarding the start time of the verification test.*



**Helmy A. Makar, P.E., M.S.**  
**Product Control Unit Supervisor**  
**NOA No. 12-0529.23**  
**Expiration Date: 09/03/2013**  
**Approval Date: 09/20/2012**

**Groff Aluminum Florida Corporation**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**5. NEW EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. *Drawing No. 12-086, titled 0.0375" Thick Galvanized Steel Storm Panel, sheets 1 through 4 of 4, and sheet 1A of 4, prepared by Tilteco, Inc., dated March 16, 2012, last revision #1 dated March 16, 2012, signed and sealed by Walter A. Tillit Jr., P.E.*

**B. TESTS**

1. *None.*

**C. CALCULATIONS**

1. *None.*

**D. QUALITY ASSURANCE**

1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

**E. MATERIAL CERTIFICATIONS**

1. *None.*

**F. OTHERS**

1. *A statement Letter from hurricane Engineering & Testing, Inc. informing our office regarding the start time of the verification test.*
2. *Bill of sale from Miami Dade Aluminum Supply & Shutters, Inc. to Groff Aluminum Florida Corp., dated 12/09/2011.*



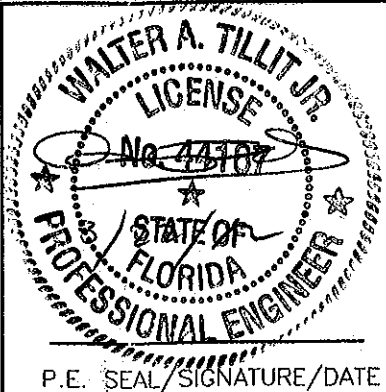
**Helmy A. Makar, P.E., M.S.**  
**Product Control Unit Supervisor**  
**NOA No. 12-0529.23**  
**Expiration Date: 09/03/2013**  
**Approval Date: 09/20/2012**

GENERAL NOTES:

1. STORM PANEL SHOWN ON THIS PRODUCT APPROVAL DOCUMENT (P.A.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2010 EDITION OF THE FLORIDA BUILDING CODE.
- DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1620 OF THE ABOVE MENTIONED CODE, USING ASCE 7-10 AND SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATING INDICATED ON SHEETS 3 & 4.
- IN ORDER TO VERIFY THE ABOVE CONDITION, ULTIMATE DESIGN WIND LOADS DETERMINED PER ASCE 7-10 SHALL BE FIRST REDUCED TO A.S.D. DESIGN WIND LOADS BY MULTIPLYING THEM BY 0.6 IN ORDER TO COMPARE THESE W/ MAX. (A.S.D.) DESIGN PRESSURE RATING INDICATED ON SHEETS 3 & 4.**
- IN ORDER TO VERIFY THAT COMPONENTS AND ANCHORS ON THIS P.A.D. AS TESTED WERE NOT OVER STRESSED, A 33% INCREASE IN ALLOWABLE STRESS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS, A DURATION FACTOR CD=1.60 WAS USED FOR VERIFICATION OF FASTENERS IN WOOD.
- STORM PANEL'S ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1626 OF THE ABOVE MENTIONED CODE AS PER HETI LAB REPORTS # 98-710, 98-711 & 98-730, PER PROTOCOLS TAS-201, TAS-202 AND TAS-203.
2. ALL STEEL SHEET METAL PANELS TO BE STRUCTURAL QUALITY ASTM A-653 GRADE 40 WITH  $F_y = 49.7$  k.s.i. (AFTER ROLLED), G-90 GALVANIZED AS PER HETI LAB REPORT # 98-T93.
3. ALL ALUMINUM EXTRUSIONS SHALL BE 6063-T5 ALLOY AND TEMPER UNLESS OTHERWISE NOTED
4. ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 AISI SERIES OR CORROSION RESISTANT COATED CARBON STEEL AS PER DIN 50018 W/50ksi YIELD STRENGTH AND 90 ksi TENSILE STRENGTH AND SECTION 2411.3.3.4 OF THE FLORIDA BUILDING CODE.
5. BOLTS TO BE ASTM A-307 GALVANIZED STEEL, OR AISI 304 SERIES STAINLESS STEEL WITH 36 ksi MINIMUM YIELD STRENGTH.
6. ANCHORS TO WALL SHALL BE AS FOLLOWS: (UNLESS OTHERWISE NOTED)
- (A) TO EXISTING POURED CONCRETE:
- 1/4"  $\phi$  TAPCON ANCHORS, AS MANUFACTURED BY I.T.W. BUILDDEX OR ELCO CONSTRUCTION PRODUCTS.
  - 1/4" ELCO male/female PANELMATE ANCHORS, AS MANUFACTURED BY ELCO CONSTRUCTION PRODUCTS.
  - 1/4"  $\phi$  x 7/8" CALK-IN ANCHORS, AS MANUFACTURED BY POWERS FASTENERS, INC.
- NOTES:
- A.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS INTO CONCRETE SHALL BE 1 3/4", AND 1 7/8" FOR ELCO PANELMATE.
- A.2) 7/8" CALK-IN SHALL BE ENTIRELY EMBEDDED INTO THE POURED CONCRETE. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4"  $\phi$ -20 AISI 304 SERIES SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO. SCREWS TO BE SIDEWALK BOLT TYPE WITH 3/4" DIAMETER HEAD.
- A.3) IN CASE THAT PRECAST STONE, PRECAST CONCRETE PANELS, OR PAVERS BE FOUND ON THE EXISTING WALL OR FLOOR, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE 1 3/4" MINIMUM FOR ANCHORS MENTIONED IN A.1), & 7/8" FOR ANCHORS MENTIONED IN A.2).
- (B) TO EXISTING CONCRETE BLOCK WALL:
- 1/4"  $\phi$  TAPCON ANCHORS, AS MANUFACTURED BY I.T.W. BUILDDEX OR ELCO CONSTRUCTION PRODUCTS.
  - 1/4" ELCO male/female PANELMATE ANCHORS, AS MANUFACTURED BY ELCO CONSTRUCTION PRODUCTS.
  - 1/4"  $\phi$  x 7/8" CALK-IN ANCHORS, AS MANUFACTURED BY POWERS FASTENERS, INC.
- NOTES:
- B.1) MINIMUM EMBEDMENT OF TAPCON ANCHORS AND ELCO PANELMATES, INTO THE CONCRETE BLOCK UNIT SHALL BE 1 1/4".
- B.2) 7/8" CALK-IN ANCHORS SHALL BE ENTERILY EMBEDDED INTO THE CONCRETE BLOCK UNIT. NO EMBEDMENT INTO STUCCO SHALL BE PERMITTED. 1/4"  $\phi$ -20 AISI 304 SERIES SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST, AND 1" MINIMUM FOR WALLS WITH NO STUCCO. SCREWS TO BE SIDEWALK BOLT TYPE WITH 3/4" DIAMETER HEAD.
- B.3) IN CASE THAT PRECAST STONE OR PRECAST CONCRETE PANELS BE FOUND ON THE EXISTING WALL, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES B.1) & B.2) ABOVE.
- (C) ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.

7. PANELS MAY ALSO BE INSTALLED HORIZONTALLY FOLLOWING INSTALLATION DETAILS SHOWN ON SECTIONS 1, 2, 3 & 4 (SHEET 2 OF 4). EXCEPT THAT FOR SECTIONS 1 & 2 ONLY, COMPONENT # ④ SHALL BE USED AT BOTH ENDS.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE SHUTTER IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE. THIS SHUTTER SHALL ONLY BE ATTACHED TO CONCRETE, BLOCK OR WOOD FRAME BUILDINGS.
9. THE INSTALLATION CONTRACTOR IS TO SEAL/CAULK ALL SHUTTER COMPONENT EDGES WHICH REMAIN IN CONTINUOUS CONTACT WITH THE BUILDING TO PREVENT WIND/RAIN INTRUSION, CAULK AND SEAL SHUTTER TRACKS ALL AROUND FULL LENGTH.
10. STORM PANEL INSTALLATION SHALL COMPLY WITH SPECS INDICATED IN THIS DRAWING PLUS ANY BUILDING AND ZONING REGULATIONS PROVIDED BY THE JURISDICTION WHERE PERMIT IS APPLIED TO.
11. (a) THIS PRODUC APPROVAL DOCUMENT (P.A.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; i.e. WHERE THE SITE CONDITIONS DEViate FROM THE P.A.D.
- (b) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT BASED ON THIS P.A.D. PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.
- (c) THIS PRODUCT APPROVAL DOCUMENT WILL BE CONSIDERED INVALID IF MODIFIED.
- (d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME OF THE ENGINEER RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.A.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.A.D. ENGINEER SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.
- (e) THIS P.A.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.
12. SHUTTER MANUFACTURER'S LABEL SHALL BE PLACED ON A READILY AND VISIBLE LOCATION AT PANEL. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABEL SHALL READ AS FOLLOWS:  
GROFF ALUMINUM FLORIDA CORPORATION.  
OPALOCKA, FLORIDA.  
MIAMI-DADE COUNTY PRODUCT APPROVED.

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 12-0529.23  
Expiration Date 09/03/2013  
By *Walter A. Tillit Jr.*  
Miami Dade Product Contr'



FLORIDA BUILDING CODE (HIGH VELOCITY HURRICANE ZONE)

©2012 TILTECO INC.  
**TILTECO INC.**  
TILLIT TESTING & ENGINEERING COMPANY  
6350 N.W. 36th St., Ste. 305 - VIRGINIA GARDENS, FL 33166  
Phone : (305) 871-1530 , Fax : (305) 871-1531  
e-mail: tiltco@aol.com  
EB-0006719  
WALTER A. TILLIT Jr., P.E.  
FLORIDA Lic. # 44167

0.0375" THICK GALVANIZED STEEL  
STORM PANEL

**GROFF ALUMINUM FLORIDA  
CORPORATION**

13125 NW 47 AVE  
OPALOCKA, FL. 33054  
PH: (305) 687-4195, FAX: (305) 681-6613

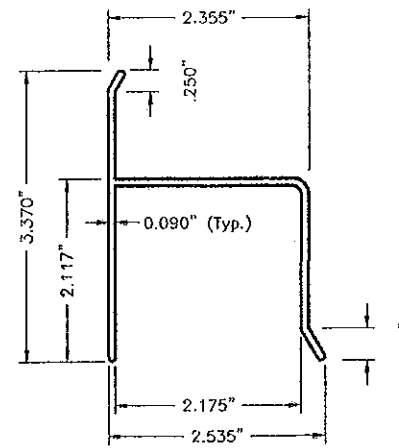
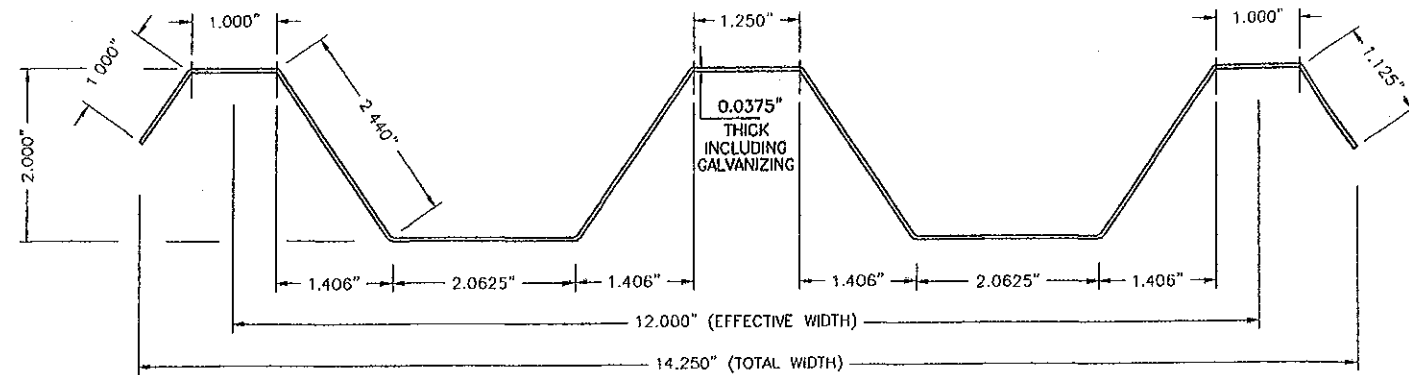
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 11-051	03/16/12	3	-	-
2	-	-	4	-	-

R.E./A.G.  
DRAWN BY:

03/16/12  
DATE:

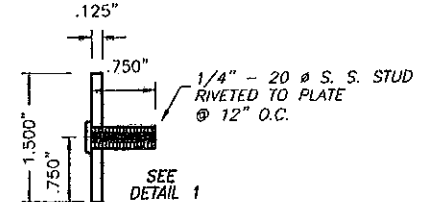
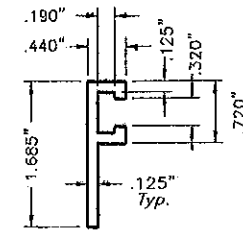
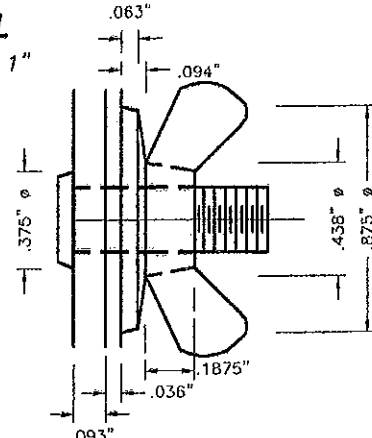
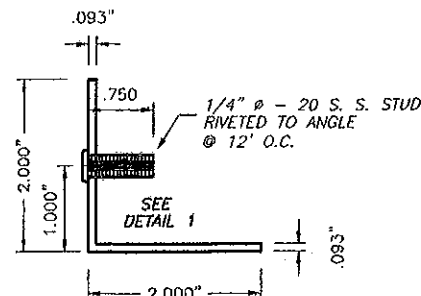
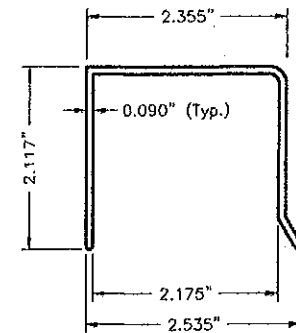
12-086  
DRAWING N°

SHEET 1 OF 4



① PANEL  
SCALE: 1/2" = 1"

② HEADER  
SCALE: 1/2" = 1"



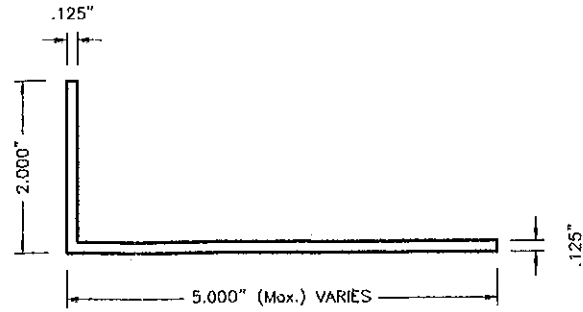
③ HEADER  
SCALE: 1/2" = 1"

④ BASE ANGLE  
SCALE: 1/2" = 1"

DETAIL 1:  
SCALE: 1 1/2" = 1"

⑤ "F" TRACK  
6063-T6 ALLOY  
SCALE: 1/2" = 1"

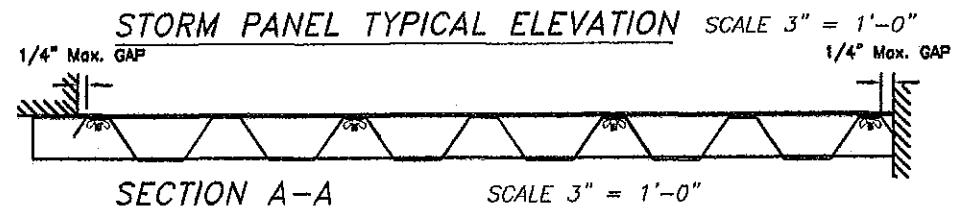
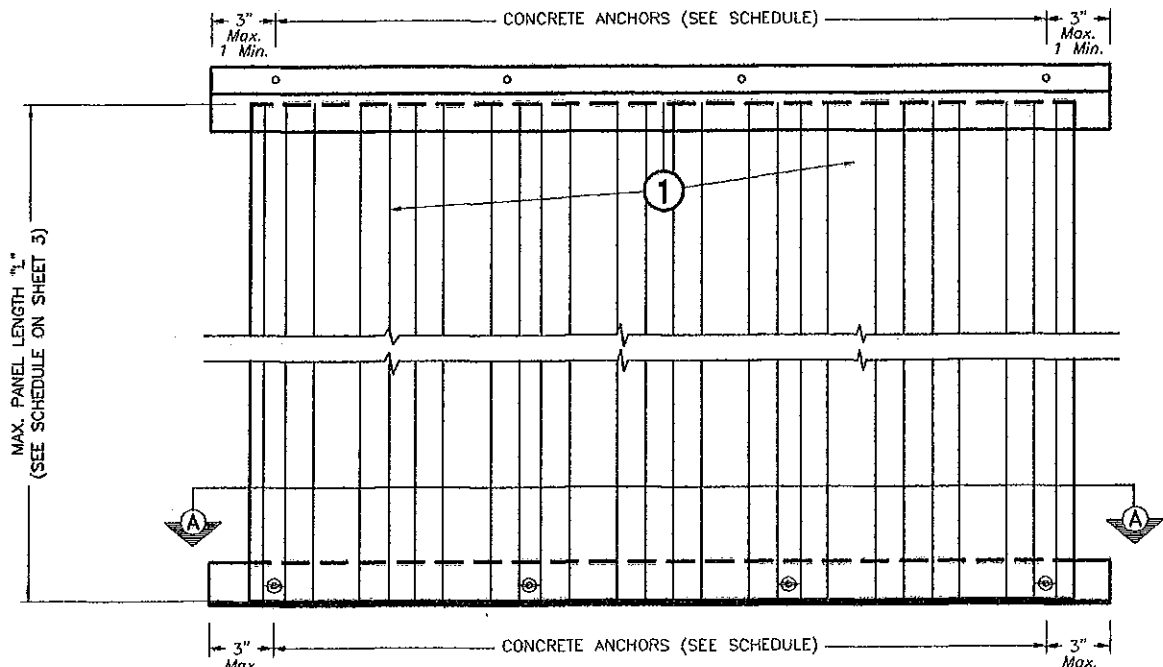
⑥ .125" PLATE  
6063-T6 ALLOY  
SCALE: 1/2" = 1"



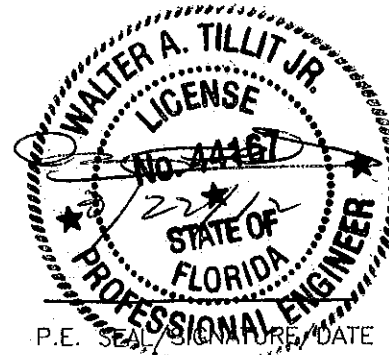
⑦ 2" x 5" (Max.) x .125" ANGLE  
SCALE: 1/2" = 1"

## COMPONENTS

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 12-0529.23  
Expiration Date 09/03/2015  
By *Walter A. Tillit Jr.*  
Miami Dade Product Control

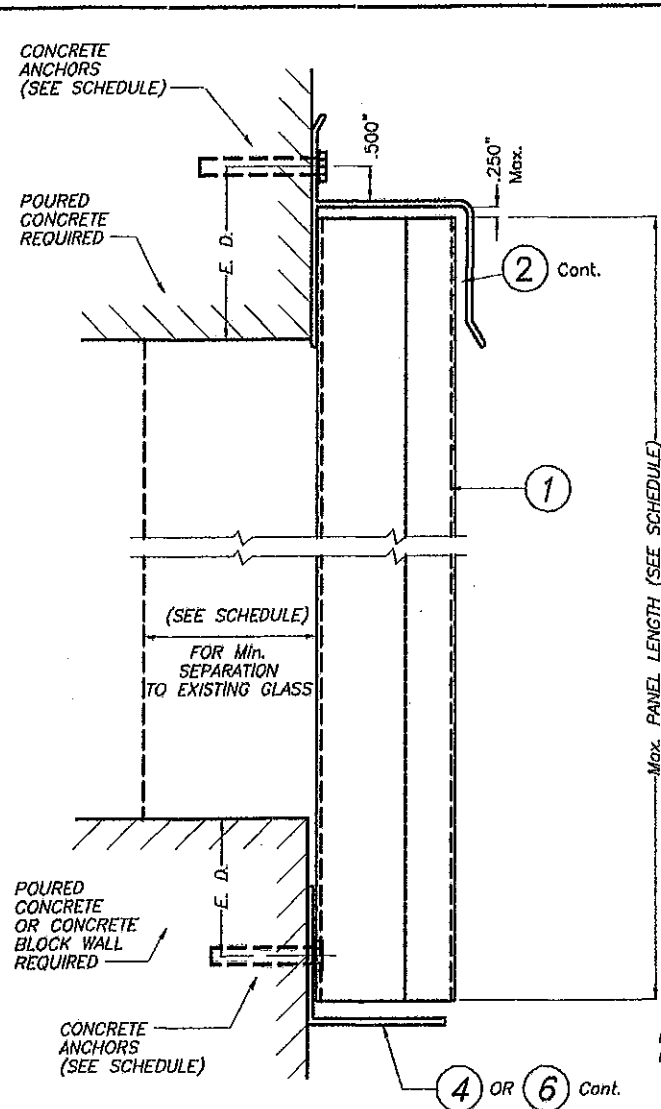


## FLORIDA BUILDING CODE (HIGH VELOCITY HURRICANE ZONE)



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e-mail: tilteco@aol.com  
EB-0006719  
WALTER A. TILLIT Jr., P.E.  
FLORIDA Lic. # 44167

0.0375" THICK GALVANIZED STEEL STORM PANEL			R.E./A.G. DRAWN BY:		
GROFF ALUMINUM FLORIDA CORPORATION			03/16/12 DATE:		
13125 NW 47 AVE OPALOCKA, FL. 33054 PH: (305) 687-4195, FAX: (305) 681-6613			12-086 DRAWING N°		
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 11-051	03/16/12	3	-	-
2	-	-	4	-	-

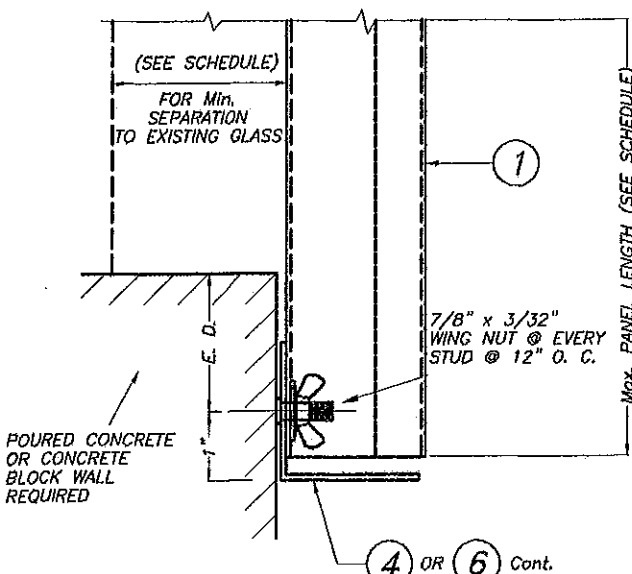


SECTION @ ANCHOR

**CEILING & FLOOR MOUNT. INSTALL.**  
- SECTION 2

SCALE: 3/8" = 1"

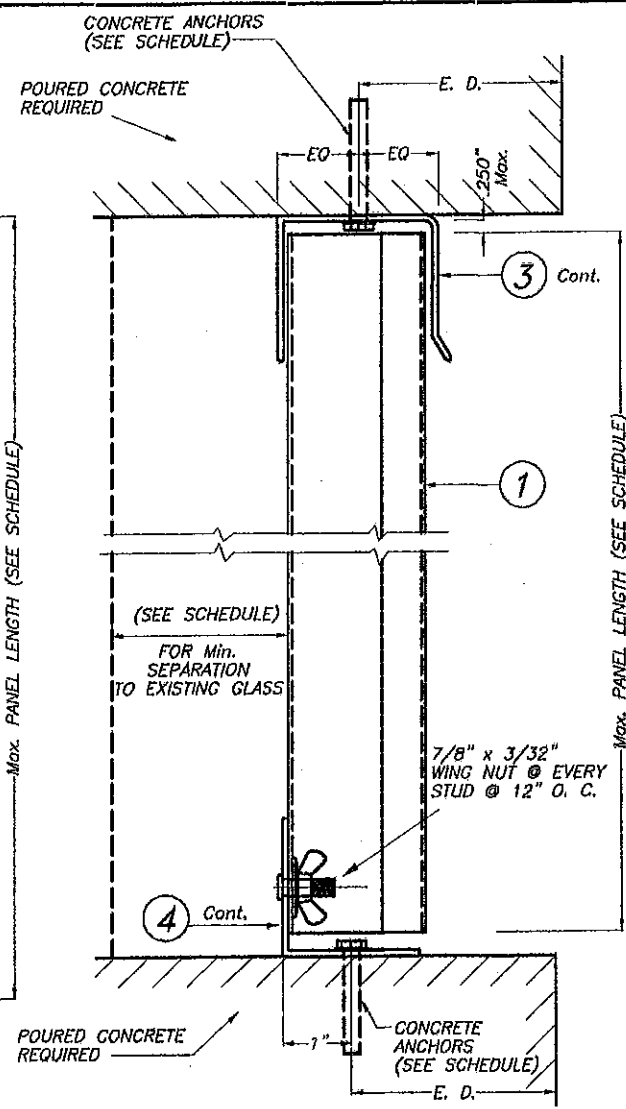
NOTE FOR COMBINATION OF SECTIONS :  
WALL/FLOOR/CEILING MOUNTING SECTIONS  
CAN BE COMBINED IN ANY WAY TO SUIT  
ANY INSTALLATION.



SECTION @ STUD

**WALL MOUNTING INSTALLATION**  
- SECTION 1

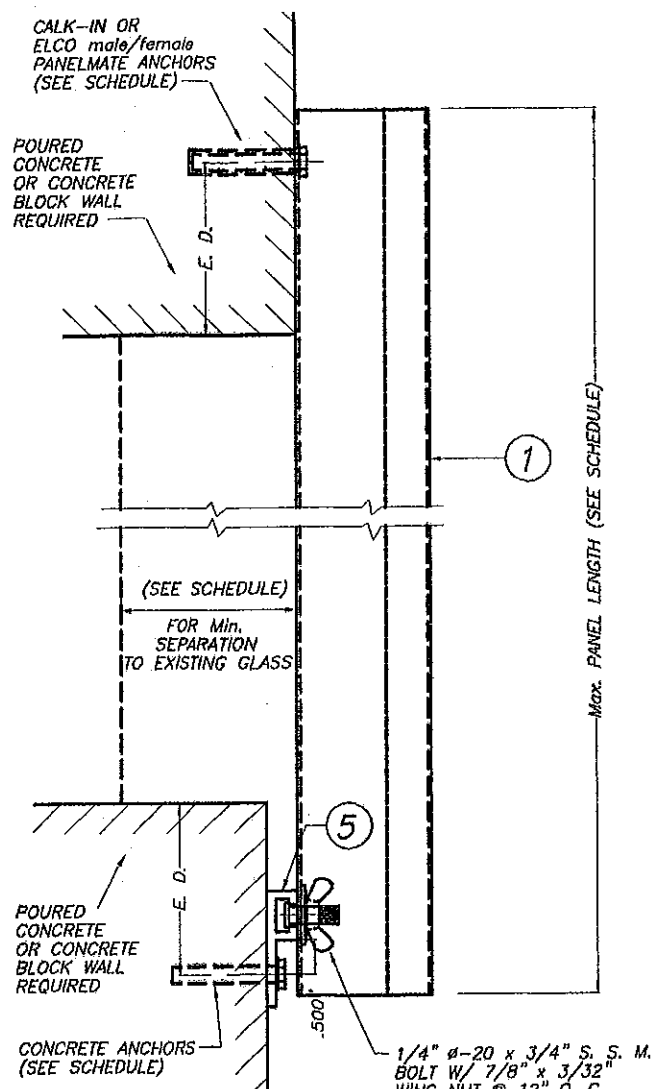
SCALE: 3/8" = 1"



**WALL MOUNTING INSTALLATION W/  
DIRECT MOUNT - SECTION 3**

SCALE: 3/8" = 1"

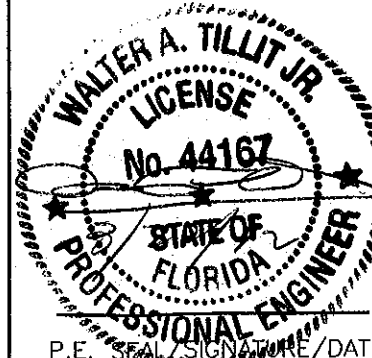
E. D. = EDGE DISTANCE  
(SEE SCHEDULE  
ON SHEET 3 OF 4)



**BUILD-OUT WALL MOUNTING INSTALLATION**  
- SECTION 4

SCALE: 3/8" = 1"

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 12-0529.23  
Expiration Date 09/03/2013  
By *Healy A. Miller*  
Miami Dade Product Contr.



FLORIDA BUILDING CODE (HIGH VELOCITY HURRICANE ZONE)

©2012 TILTECO INC.

**TILTECO INC.**  
TILLIT TESTING & ENGINEERING COMPANY  
6305 N.W. 36th St., Ste. 305 - VIRGINIA GARDENS, FL 33166  
Phone : (305) 871-1630, Fax : (305) 871-1631  
e-mail: tilteco@aol.com  
EB-0006719  
WALTER A. TILLIT JR., P.E.  
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0.0375" THICK GALVANIZED STEEL  
STORM PANEL

**GROFF ALUMINUM FLORIDA  
CORPORATION**

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OPALOCKA, FL 33054  
PH: (305) 687-4195, FAX: (305) 681-6613

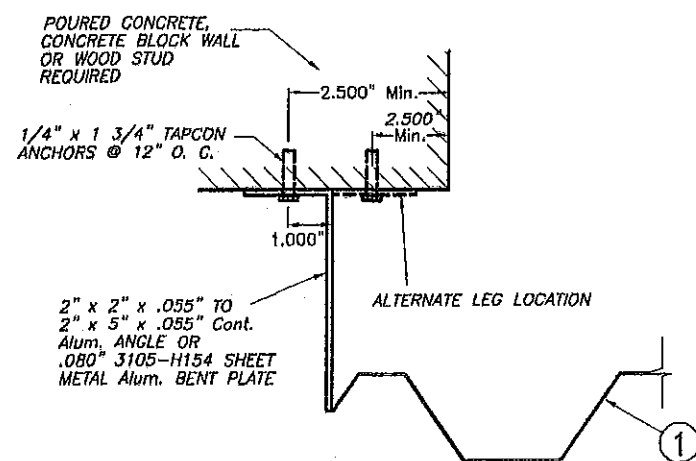
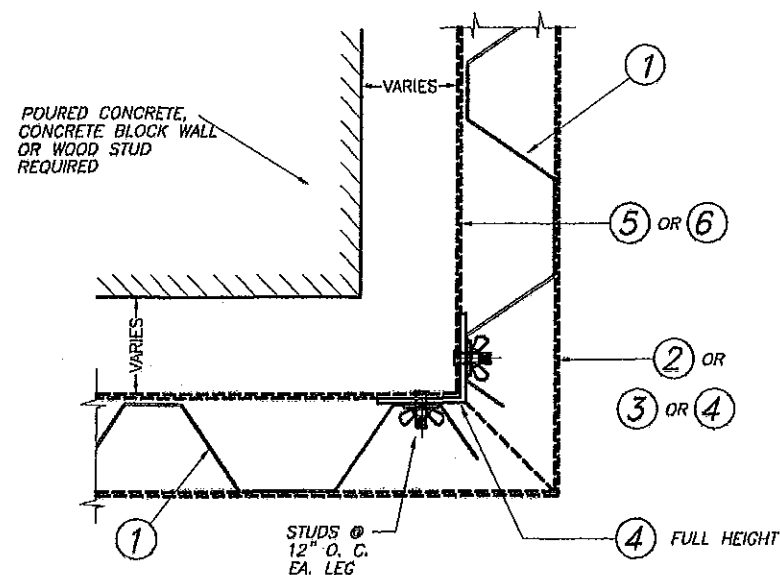
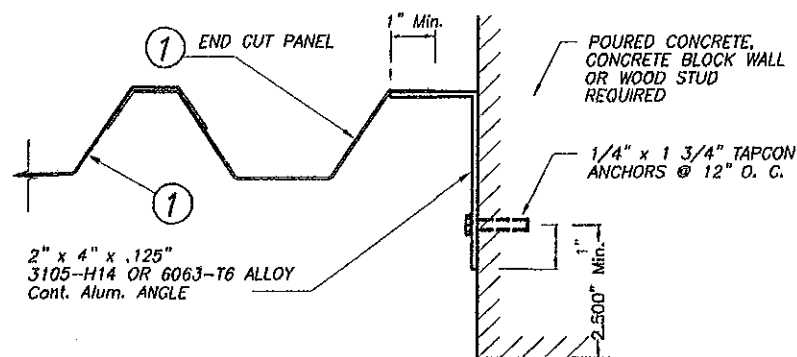
R.E./A.G.  
DRAWN BY:

03/16/12  
DATE:

12-086  
DRAWING N°

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 11-051	03/16/12	3	-	-
2	-	-	4	-	-

SHEET 2 OF 4



CASE C (Plan)

END CLOSURES DETAILS

SCALE :  $3/8" = 1"$

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.) AND  
CORRESPONDING MAXIMUM SPAN "L" SCHEDULE

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	Max. PANEL SPAN L (ft.)	MINIMUM SEPARATION TO GLASS	APPLICABLE TO SECTIONS # (SEE SHEET 2 OF 4) OR ANY COMBINATION OF THEM
+60.0, -64.0	10'-0" OR LESS	3 3/8"	1, 2, 3 & 4

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.) AND CORRESPONDING MAXIMUM ANCHOR SPACING SCHEDULE FOR INSTALLATIONS INTO CONCRETE AND C.B.S. STRUCTURES \*

MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.)	MAXIMUM ANCHORS SPACING **						APPLICABLE TO SECTIONS #	MAXIMUM PANEL SPAN L (ft.)
	TAPCON		CALK-IN		PANELMATE			
	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY	TO CONCRETE	TO MASONRY		
+60.0, -64.0	5 1/2"	N/A	5 1/2"	N/A	3"	N/A	1 (TOP)	10'-0" OR LESS
	12"	5 1/2"	12"	8"	10"	9 1/2"	1 (BOTTOM)	
	9"	N/A	8 1/2"	N/A	7"	N/A	2 (TOP)	
	8"	N/A	7"	N/A	5 1/2"	N/A	2 (BOTTOM)	
	N/A	N/A	12"	6"	6"	6"	3 (TOP)	
	11 1/2"	5 1/2"	11 1/2"	8"	10"	9 1/2"	3 (BOTTOM)	
	11 1/2"	3 1/2"	11 1/2"	5 1/2"	6 1/2"	6 1/2"	4 (TOP/BOTTOM)	

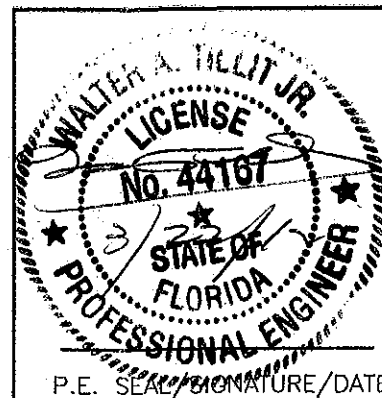
\* SEE SHEET 4 OF 4 FOR ANCHORS TYPE & SPACING FOR INSTALLATION INTO WOOD FRAME BUILDINGS.

\*\* MAXIMUM ANCHOR SPACINGS ARE VALID FOR 3 1/2" EDGE DISTANCE.  
FOR E. D. LESS THAN 3 1/2", REDUCE ANCHOR SPACING BY MULTIPLYING  
SPACINGS SHOWN ON SCHEDULE BY THE FOLLOWING FACTORS.  
(Min. E. D. FOR CALK-IN ANCHORS IS 2 1/2").

ACTUAL E. D.	FACTOR	
	TAPCON / PANELMATE	CALK-IN
3"	.86	.75
2 1/2"	.71	.50
2"	.50	-

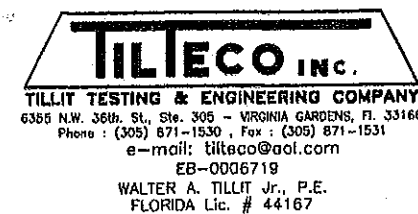
THIS EDGE DISTANCE REDUCTION IS NOT ALLOWED FOR DIRECT MOUNT INSTALLATIONS (SEE SECTION 3 (TOP) ON SHEET 2 OF 4)

**PRODUCT REVISED**  
as complying with the Florida  
Building Code  
Acceptance No 12-0529.23  
Expiration Date 09/03/2013  
By [Signature]  
Miami Dade Product Control



FLORIDA BUILDING CODE (HIGH VELOCITY HURRICANE ZONE)

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0.0375" THICK GALVANIZED STEEL  
STORM PANEL

**GROFF ALUMINUM FLORIDA  
CORPORATION**

13125 NW 47 AVE  
OPALOCKA, FL. 33054  
PH: (305) 687-4195, FAX: (305) 681-6613

R.E./A.G.  
DRAWN BY:

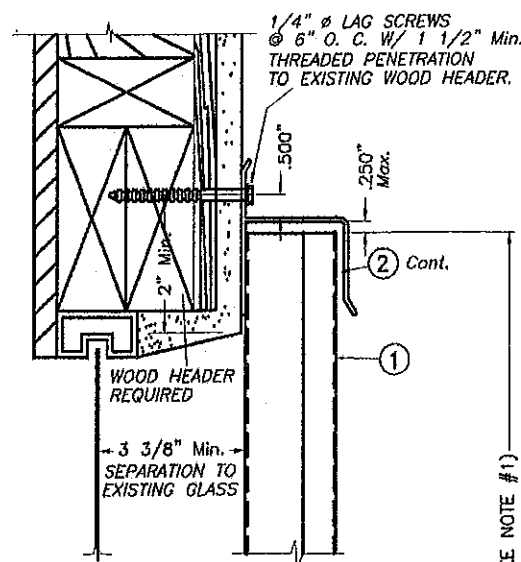
03/16/12  
DATE:

12-086  
DRAWING N°

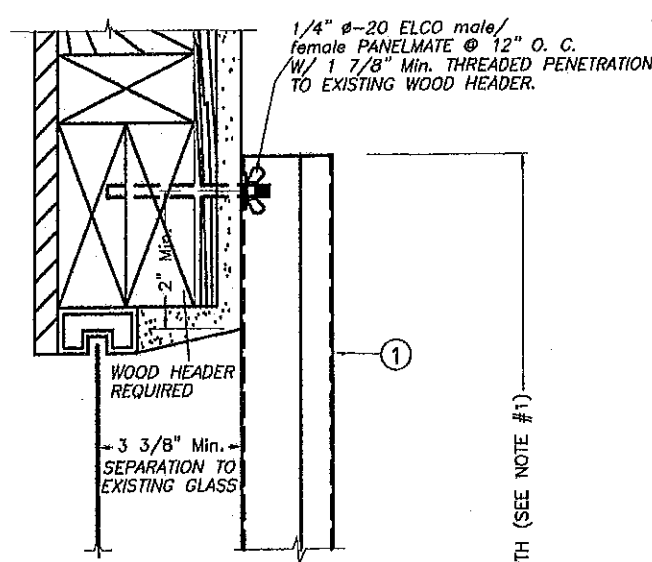
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 11-051	33/16/12	3	-	-
			4	-	-

SHEET 3 OF 4

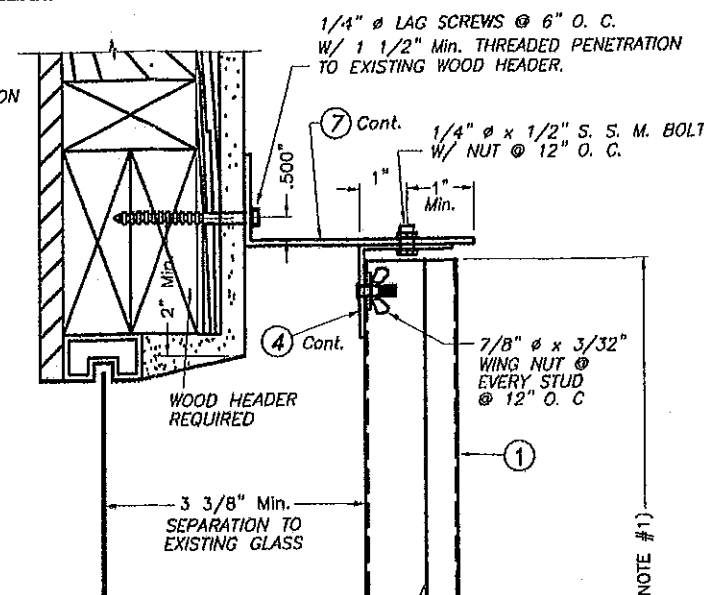




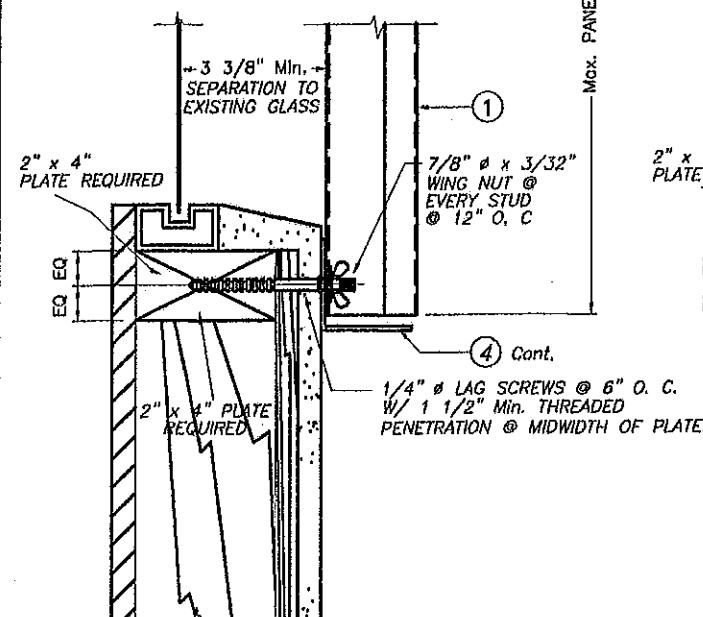
ALTERNATIVE 1



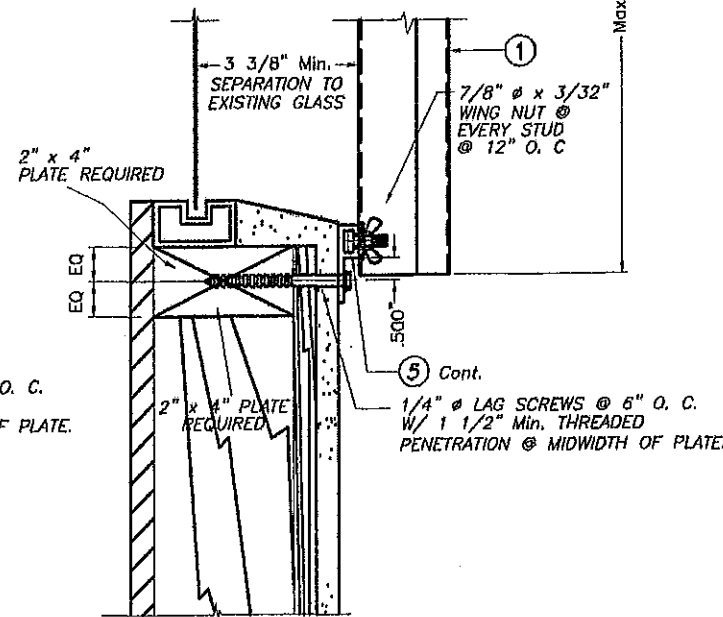
ALTERNATIVE 3



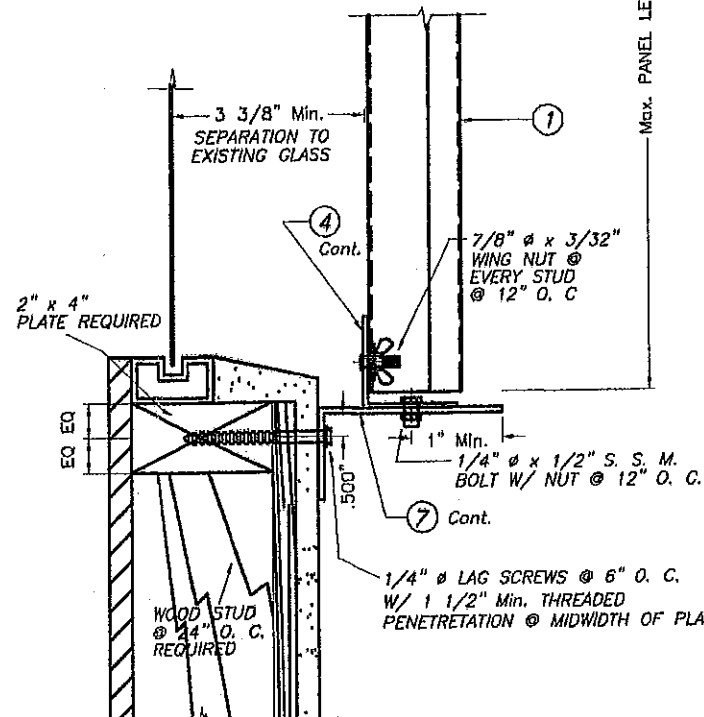
ALTERNATIVE 5



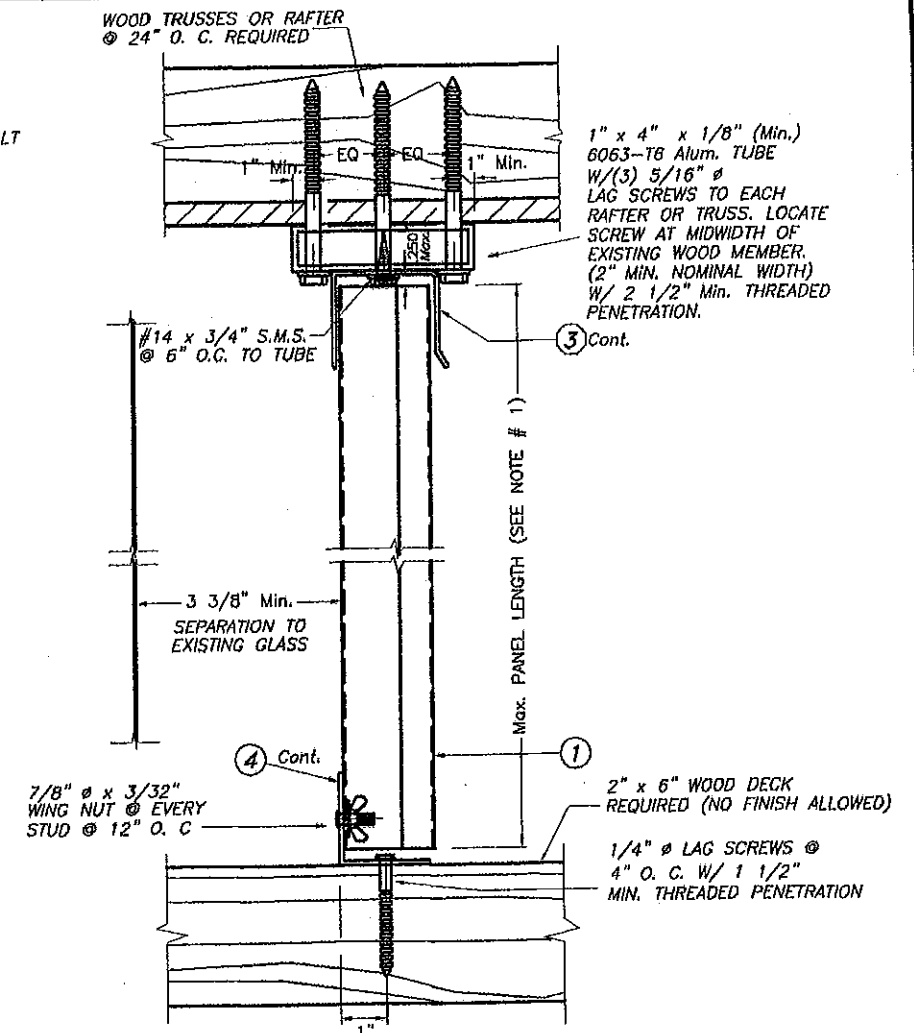
ALTERNATIVE 2



ALTERNATIVE 4



ALTERNATIVE 6



CEILING & FLOOR MOUNTING INSTALLATIONS

- SECTION B

SCALE: 1/4" = 1"

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 12-0529.23  
Expiration Date 09/03/2013  
By *Healy A. Miller*  
Miami Dade Product Contr.

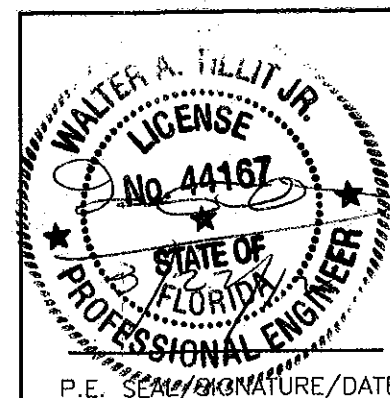
WALL MOUNTING INSTALLATIONS - SECTIONS A

SCALE: 1/4" = 1"

NOTE FOR COMBINATION OF SECTIONS:  
SECTIONS CAN BE COMBINED IN ANY WAY TO  
SUIT ANY INSTALLATION.

NOTES:

1. INSTALLATIONS ARE ONLY VALID FOR BUILDINGS WITH A.S.D. DESIGN PRESSURE RATING UP TO +60.0, -64.0 p.s.f. AND PANEL'S LENGTH UP TO 10'-0".
2. FOR NEW WOOD FRAME CONSTRUCTION: WOOD MEMBERS TO BE SOUTHERN PINE No. 2, W/ SPECIFIC DENSITY OF 0.55 OR EQUAL.



P.E. SEAL/SIGNATURE/DATE

FLORIDA BUILDING CODE (HIGH VELOCITY HURRICANE ZONE)

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**TILTECO INC.**  
TILLIT TESTING & ENGINEERING COMPANY  
6358 N.W. 36th St., Ste. 305 - VIRGINIA GARDENS, FL 33166  
Phone: (305) 871-1530, Fax: (305) 871-1531  
e-mail: tilteco@aol.com  
EB-0006719  
WALTER A. TILLIT Jr., P.E.  
FLORIDA Lic. # 44167

0.0375" THICK GALVANIZED STEEL  
STORM PANEL

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SHEET 4 OF 4